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ABSTRACT

Outcomes of a project that implemented a management information system to effectively gather and record student data are presented in this practicum report. The project, implemented in the adult education department of a community college and its various offcampus locations, consisted of three components: a BASIC program to calculate students' time cards; an attendance spreadsheet; and a database to record all data. A manual was also developed and aides were trained to implement the program. Evaluation was based on interviews conducted with the supervisor and administrators; comparison of recorded data; and questionnaires administered to 2 administrators, 38 teachers, and 11 aides. All administrators and aides and all but 16 teachers responded to the survey. The project met five out of eight of its objectives, which included greater assistance in obtaining detailed student information, a reduction in paperwork, the aides' acquisition of a new management information system skill, improved accuracy of student records, and decreased calculation time. Appendices contain the computer project components, a spreadsheet printout, student registration and data forms, a copy of the manual, and the questionnaire with a summary report. (18 references) (LMI)

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RESTRUCTURING STUDENT DATA INTO USEFUL INFORMATION THROUGH COMPUTERIZATION

by

Gay Ann Gross

U.S. DEPARTMENT OF EDUCATION
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A Practicum Report

Submitted to the Faculty of the Center for the Advancement of Education at Nova University in partial fulfillment of the requirements for the degree of Master of Science.

The abstract of this report may be placed in a National Database System for reference.

February 1992

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Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my work, presented here, will earn similar respect.

Signed Gary Ann Davis

Abstract

Restructuring Student Data Into Useful Information Through Computerization.
Gross, Gay Ann, 1991: Practicum Report, Nova University, Center for the Advancement of Education
Descriptors: Database Management Systems/Information Storage/Information Retrieval/Data Collection/Student Records/Adult Students/Management Information Systems

The practicum project addressed the problem of gathering and recording student data in one place, thus allowing for accurate reporting and decision making with the information available.The target population was the adult education department located on a community college campus and other off campus locations. The outcome objectives were to gather and record data more accurately, compute attendance with more accuracy in less time and make information readily available to teachers and administrators. The aides learned new computer skill. Reports were generated with greater speed and accuracy. The implementation strategy required creating a management information system (MIS) consisting of three major components. The first was a BASIC program, created to calculate the student's time cards. The second was an attendance spreadsheet to record attendance. The third was a database for recording all data. A manual was written to support the MIS. Aides were trained to perform the various tasks. The program was carefully monitored. A questionnaire was distributed and the administrators responded favorably to the MIS. Tasks were performed with more accuracy. Paperwork performed by the aides was reduced. An original time card program was written that was easily learned and used. Reports were generated with greater speed and accuracy. Other areas within the department are going to begin using the student information system. Appendices include computer program components, spreadsheet printout, student registration and data forms, database structure, request for data forms, monthly report forms, the manual, questionnaire with summary report.

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CHAPTER I

PURPOSE

BACKGROUND

The setting of this practicum project is best described as unique. The county has a permanent population of 152,000. The seasonal tourists swell the population to over 200,000. There has been tremendous growth of permanent residents over the last 10 years. This resulted in a population growth increase of 74 percent.

The economy depends upon six major employment sources. Light industry, construction, nuclear power plant, tourism, services and agriculture, including citrus and cattle, constitutes the county's socio-economic base. Among the full-time residents, the employment rate is two to three percent higher than the national average.

This practicum project was administered in the adult education department on a community college campus. The 100-acre campus offers a wide variety of classes. The student can earn an Associate of Art or Science degree or earn a certificate. Computer, secretarial, cosmetology,

automotive, and industrial classes enable a student to pursue a career. Annual enrollment has grown steadily. More than 48,000 students are enrolled annually.

The adult education department offers various programs for the adult student. The non-reading student or the student with a reading ability of fourth grade or less is tutored with a student/teacher ratio of 4:1 in the literacy lab. Also offered is a study program that prepares the student to take the General Educational Development (GED) exam. Students passing the exam receive GED high school equivalency diplomas.

The 38 adjunct faculty members were carefully selected, each with a special ability. More than 30 percent of these teachers have a masters, specialist, or doctoral degree. The teachers have the title learning manager. There are 11 capable aides that assist these teachers.

Total annual unduplicated enrollment count is approximately 1500 students. Students come to the center when it is convenient for them to attend. The center is open mornings, afternoons, and evenings.

The students range in age from 16 to 75. Approximately 40 percent are unemployed and over half of

those are required to attend a specified number of hours each week to fulfill contractual hours for various reasons.

The employed students are often underemployed and are usually self-motivated to achieve their goals. Many are living at or near the poverty level.

The student population is comprised of many different ethnic cultures. Distribution of the student population in percentiles is as follows:

WHITE	57.2%
BLACK	34.9%
HISPANIC	6.4%
ALASKAN NATIVE/AMERICAN INDIAN	1.2%
ASIAN/PACIFIC ISLANDER	.3%

The new student is given a battery of tests. The first test, the Locator, requiring about one hour of testing time, is short and is used to determine the approximate grade level in the areas of math, language, and reading. The second test is available in four levels, easy, medium, difficult, and advanced. The student may be tested at one level in reading and language, and at a different level in math. The easy level is from grades K through 3, medium level is grades 4 to 6, difficult from 7 to 9 and advanced from 10 to

12.9+. Additional testing is performed at three month intervals. These test results show the level of grade mastery.

Upon determining the grade levels achieved in math, language, and reading, an individualized study prescription is created. The student then studies from the prescription. Materials for all grade levels are available. The materials are written for the adult student. The student performs a prescribed task and has the answers checked by a teacher. All work is performed as a self-study program with the teacher interacting only when assistance is required.

Another form of individualized study is computer assisted instruction (CAI). The student is enrolled in computer courses that parallel the work being performed from the student's prescription. CAI enables the student to answer a question and know immediately if the answer is correct. An incorrect answer provides the student a second chance to answer the question and is given an explanation showing how to obtain the correct answer.

The writer has chosen teaching as a mid-life career choice. Before leaving the business world a four year college program was completed. The degrees earned are

Associate of Science in Computer Science and Bachelor of Science in Technology, and also the additional 20 hours in education courses that are required for a teaching certificate.

The writer has been teaching for three years and is now teaching at the postsecondary level in both the computer science department and the adult education department. Responsibilities within the adult education department include overseeing the students who use the computers. The computers are used for computer assisted instruction (CAI). Personalized assistance is available to the student to aid in understanding concepts or explaining concepts through similar examples.

PROBLEM STATEMENT

Reports are an integral part of the education system. The information to create these reports should be readily available. All data should be gathered and put into one specific place, ideally an electronic database. If this is done, the reports would be more accurate and much easier to compile. This should ensure that more accurate reports could be submitted.

Data was being stored in several locations on and off campus. The gathering of this information, for report purposes was slow and required many labor intensive hours. The data was handled numerous times and each time it was handled it presented a potential opportunity for inaccurate information to be transmitted. The transposition of numbers, omission of data, or copy errors became increasingly more likely.

Computers first entered the schools through the classroom and by-passed the administration offices, writes Staff (1987). One reason for this was the lack of software available to handle this enormous task. The development of databases and spreadsheets has enabled administrators to take advantage of the power of the computer.

Michael Yost (1985) states that there must be adequate information on which to base administrative decisions. A strategy to gather information that is useful in decision-making and strategy-shaping can be formed with the inception of a management information system. The objective of such a system is its ability to accumulate, store, and display information quickly. A great deal of thought, preparation, and work is required to create an effective management information system. The goals and purposes should be formulated before a plan is put into effect.

The introduction of computerized data management has significantly improved the ability of the system to record, assimilate, store, and recall information. A system that is efficient to the extent of minimizing work for teachers and administrators is necessary for a successful management information system, believes William Blank (1985).

It was observed that the process of calculating the time cards used by the students required approximately 26 hours per week. A computer program written specifically for the adult education department, would reduce the time required by 60 percent.

Time was set aside for in-depth interviews with the director of developmental education, the adult education chairperson, and the senior learning manager. Informal interviews were conducted with the coordinator of English as a Second Language, the senior learning manager, and the teachers. Additional meetings were set up with the senior learning manager to review and verify the findings.

The interviews determined that the project should make computations of the student's time card more accurate. The percent of inaccuracy was found to be as high as 20 percent, as indicated by the sample population of time cards that were studied. The inaccuracy rate should be reduced by 18 percent with the creation and use of a computer program to calculate attendance hours on the student's time card.

When the practicum project was described to the adult education chairperson all indications were that a successful project would be viewed as a potentially valuable system for the adult education department.

This project was implemented under the belief that the adult education department would be able to improve

on current methods of data handling and reduce the time required to create reports.

OUTCOME OBJECTIVES

The project was designed over a period of 18 weeks. The writer-created time clock program, the attendance spreadsheet, and the student database became an integral part of the Adult Education Department, the target group. A questionnaire, was available to all participants. Analysis of the questionnaire reported on the attainment of the following objectives.

1. One hundred percent of management will agree that the project will assist in obtaining student information in greater detail, thus allowing for more informed decision making. The percent will be computed from the questionnaire and administrative interviews.
2. Forty percent of the instructional staff will request information to aid in appropriate student interaction. The questionnaire and personal interviews will provide a the percentage rate.
3. Fifty percent of the aides will report a reduction of paperwork. The percentage will be provided by the questionnaire.

4. Twenty percent of the aides will have acquired new skills, such as using a spreadsheet and a database, while working with the management information system. The evaluation will be supported by the questionnaire.
5. Sixty percent less time will be required to calculate the time cards with the use of the BASIC program. A writer evaluation will demonstrate the accuracy of this percentage.
6. Eighteen percent increase in accuracy will be reported when compared to the manual method of calculating time cards. A Physical comparison will provide proof of percentage.
7. Sixty percent less time will be required to produce reports and with 20 percent greater accuracy. Physical comparison will yield this percentage rate.
8. Thirty percent greater accuracy will be reported when the spreadsheet is used to record attendance and produce weekly and monthly statistical analysis of student

attendance. Writer evaluation and physical comparison will enable this percentage to be computed.

The performance of the project outcome was measured by four forms of evaluation tools. The first, writer evaluation, began as soon as the project was underway. The second, an administrator interview, took place when the project ends. The third, was a physical comparison of recorded data both manual and computerized. The fourth is a questionnaire involving administrators, teachers, and aides.

CHAPTER II

Research and Solution Strategy

RESEARCH

The collection of student data has been going on since the first formal classroom was started. The student's name, attendance, grades, and test scores were some of the first pieces of information recorded. Computerization of this data on the departmental level is relatively new.

George White (1985) states that since 1978 microcomputers begin to gain acceptance within the public schools. Administrators have a need for an educational database that provides current information about the students. The goal of some administrators is an integrated electronic office.

Three of the most crucial elements in the development of microcomputer databases is the appropriate software, appropriate hardware and prior planning and coordination. The whole idea of a database is to house information electronically in a centrally located place. Thus allowing access to this information for all

administrators and teachers in an efficient and speedy manner.

Juli Rutledge (1984) reported that the federal government passed the Federal Records Act of 1950 to standardize record keeping requirements.

Administrators search continually for more efficient and effective methods of record management. These mandates can be transferred to a computerized system.

A student data system would provide an efficient process for student identification, registration, and attendance. Data required for input includes name, home address, birthdate and other vital information, says Freeman (1983).

Critical thinking is the testing and evaluating of proposed solutions initiated through creative thinking, contends W. Edgar Moore (1985). Ideally, critical thinking requires adequate information, but this information is not always initially available. The techniques of critical thinking uses a cycle of these five phases: 1) recognize and define the problem, 2) gather information, 3) form tentative conclusions, 4) test tentative conclusions, and 5) perform evaluation of decisions.

Research literature was inadequate at the departmental level, but abundant for an entire school administrative setting. Some of the techniques can be adapted for use at the departmental level.

Peter Drucker (1985) claims, in Donald Johnson's article about the office of the future, that the future computerization of school offices is rapidly becoming reality and a structure in which information serves as the axis and the central support system.

Individual departments need to maintain information both for the program applicants and for the currently enrolled students. Records must be easily accessible, and frequently there is the need to update records or create summary and status reports believes Hogrebe and Dwinell (1984).

Hogrebe and Dwinell (1984) explained that with developmental studies programs, a management information system is becoming a necessity. Typically, developmental programs have enrollments from 300 to 1,000 students. Students usually do not matriculate in the same academic period each year, and the time to complete the program varies widely; thus recordkeeping is a difficult task. Detailed information such as test scores and grades must

be kept for each student in order to determine eligibility for exiting the program.

The administrative tasks in education are as complex and demanding as those in any business organization, states Marshall (1982), and as in business, administrators have much to gain from computerized assistance.

William Weintraub (1985) writes that any school business office that still is doing without up-to-date computer technology probably is wasting staff time, thereby costing taxpayers more than necessary. Computerizing school offices allows for more efficient use of employees' time and translates into more productive work time.

The methods of data collection vary, but each has a system to fit a particular need. The techniques discussed in the literature have many common factors.

The data collection process requires careful organization. The selection of software requires much thought and attention to expected results. Personnel attitudes and training were often taken into consideration.

Del Stover (1986) expresses an opinion that keeping up with student records is as easy as pushing a button--if you replace your inefficient, time-consuming paper filing system with a computerized record-keeping program. Almost all schools use some form of computerized record keeping. Individual areas or departments that are responsible for providing information for state and federal agencies need computerized record keeping for accurate student accounting. Thus, an efficient comprehensive system for maintaining student records is essential.

There are many electronic databases in use in schools. They all have some fields in common, such as, name, address, phone number, and a few other identifying fields. Many are just that simple, others are more complex. Most are used to aid in creating reports as well as analysis of data.

Database management programs must be designed for a specific use. Conners and Valesky (1987) suggest the selection of each with a specific purpose. Once the format has been determined, a data entry person can input data with a small amount of training. The technique of extracting data would require further training.

Training of the staff for the use of application software is required for the reliability of the information retrieved from the data, explains Jack Hill (1988) in his article about microcomputer technology. Further stated is that 10 consecutive days is a minimum period of training for each piece of application software used.

SOLUTION STRATEGY

The strategy that was created has been constructed through the use of the critical thinking phases. The writer first recognized there was a problem in organizing and recording data through observation. Much information was gathered by talking with the people directly affected by the process of recording and retrieving information as well as the persons requiring information for decision making. Then a tentative conclusion was formed that a need existed for a better method of organizing, recording, and retrieving data. The tentative conclusion was tested by performing an inspection of sample data. The current time cards were recorded by manual calculations. A random sample was recalculated and found to have an unacceptable rate of errors. An evaluation was performed and the decision to create a more effective way to handle data and the necessary steps to correct the problem was taken.

A thorough review of the professional literature indicated that this type of project must have a central location for data collection. A central location site was included in the project's plan. Another indication of a successful student management information system is

a workable database design. The design of the database selected for the project plan was functionally appropriate for the project.

Juli Rutledge (1984) points out that even the best computer technology available will not benefit an administrator if the flow of data and the process collection methods are not well planned. A sound record management system consists of the following: 1.) Defines what information is valuable to whom and when; 2.) Determines what records should be retained and where; 3.) Provides security for all data records; and 4.) Creates accurate documentation that fulfills legal responsibilities;

A program such as this requires a coordinator with a thorough understanding of the organizational structure. The coordinator must also have the support of management and staff.

Nick Piazza (1990) expounds that the need to keep records is clear, but there is little information available as to how to construct the records. Suggestions on how to keep records should include personal and demographic data. Creation of a written photograph of the student using name, address, telephone

number, date of birth, sex, ethnic origin, next of kin, education, marital status, type and place of employment, and date of initial contact with the student is necessary. Other database items would include an educational assessment including grade level for grade placement and a physical assessment including handicaps and drug and alcohol abuse record. Student goals must also be included.

Nicole Melander(1989) wrote about the latest innovations in databases, the relational database. That is, a mathematically based system of rules about how to perform information management functions like capturing, processing, and retrieving information. Relational technology has greatly surpassed all other past database technology.

This enables the user to access, manipulate, and control the information retrieved. Further stated is that education can benefit greatly from this technology through increased computing power.

This practicum includes two components that are not mentioned in the literature. The first component is composed by the writer. A time card program, written in the Beginner's All-purpose Symbolic Instructional Code

(BASIC) programming language, designed to calculate the daily time from the student's time card. The second component is a spreadsheet used to accumulate the daily attendance so weekly and monthly totals can be obtained. The other component is the database. This is well covered in the research literature. A reference manual that includes instructions on software and hardware usage is sometimes made available along with training sessions for the personnel involved.

Selecting the database and spreadsheet required finding programs that were powerful enough to handle the volume of work that was anticipated. Commercial software was chosen over public domain software for the spreadsheet and database because of the reliability and power available to the user.

Two types of databases are usually available to perform the same tasks. Luke Kelly (1987) describes both in his article about management of student performances. The first type is the specialized database. It has been created to perform certain fixed functions that are required, but is limited in many areas. The generic database, like Dbase III Plus or Foxbase Plus is multi-purpose. It can perform all the required

functions, yet is flexible enough to conform to additional requirements should the need arise. Computers have been used for collecting and storing data for many years. The methods chosen to store and retrieve data effectively was a significant factor in determining the success of the project.

Melander (1987) stated that funds are often limited and many schools lack the money to hire a data processing professional. Administrators can overcome this barrier by selecting sophisticated software over experienced personnel, thereby producing a twofold advantage: more power in the hands of the users and less need for computer technicians.

Greg Kearsley (1988) introduces his plan for a successful implementation plan in his article on what school administrators should know about computers. Further suggested is a staff orientation meeting and to provide training for procedures in backup, security, and program usage. When selecting application software such as word processors, databases, or spreadsheets, a full understanding of the problem to be solved, as well as the methods to be used, should be considered first.

CHAPTER III

Methodology

IMPLEMENTATION PLAN

The strategies that were developed used the five phases of critical thinking. Knowing that critical thinking does not stop here, each major step required some form of additional critical thinking techniques before an action was taken.

The implementation plan required six major steps. The first step was the writing of the BASIC program to calculate the students' time cards. The second step was the creation of the spreadsheet. The third step was to modify the existing database. The fourth step was the training of personnel. The fifth step was to write a manual. The sixth and final step was to set-up a monitoring system. The implementation plan was carefully set into motion and completed in a little over eighteen weeks.

STEP I

The implementation process began with the major step of creating a BASIC program to calculate the students'

time cards. The programming language used was BASIC. First, pseudocode, a handwritten plan, was formulated to put general ideas on paper. Second, a flowchart was created to aid in coding the program. Third, the code was written in the BASIC programming language. (See Appendix A:45) Fourth, the coded program was tested, syntax was corrected, and the program became functional. The program is operated through a menu. The menu offers these four selections:

1. Compute daily time
2. Compute a block of time
3. Display directions
4. Quit.

The computer operator has a choice of computing daily times or a block of time, which may consist of a couple of days, or a week, or even a month. Since each student will have a minimum of one "in" and one "out" time and some students may have as many as a dozen times, this program has been structured to handle this fluctuation of times. Error trapping was included to find invalid times that were entered into the program. The program contained adequate documentation in case revisions were required. The practicum was established

so time cards were computed daily, but also allowed for circumstances that changed. Each of the compute selections offer the aide an opportunity to print the time card calculations to the screen or on paper.

Directions in this user-friendly program are available if needed, but reading them once or twice was sufficient.

An aide was selected to use the time card program. Each time card was calculated for the prior day. The date and the total number of hours and minutes were written on the time cards. Approximately five hours per week were required to calculate the time cards.

STEP II

The spreadsheet was created using a commercial program named Lotus 123. The first spreadsheet was created for the month of July. The students' names were placed down the left column of the spreadsheet. Across from each name were columns for Monday through Friday for each week in the month, as well as weekly and monthly total columns. Daily attendance from the computer calculated time cards were recorded in the spreadsheet. The spreadsheet when calculated created weekly and

monthly totals. Each week the totals were printed and placed in a binder. At the end of each month totals were printed and placed in a binder. The teachers and administrators have access to the printout at all times. (See Appendix B:56) The aide spent approximately five hours per week performing this task.

STEP III

The commercial program selected as the database was a powerful program named Foxbase Plus. It is a relational database that allows information to be retrieved in two ways. The first is the extraction of information through the immediate command mode. The second method is done using the programming language built into Foxbase Plus. These programs can be saved and run at anytime.

The existing database was modified to enable the fields to match the data contained on the student registration form and the student data sheet. (See Appendix C:63) The database structure is comprised of 100 unique fields. (See Appendix D:66) Each field was selected to provide information as the need for it arose. For example monthly reports that helped administrators

make informed decisions and provide information that makes state mandated reports easier to compile. The database was also available for the daily routine tasks that required some form of information retrieval. The data used to build the database was collected in one central location. A system was created to keep data flowing smoothly from off campus sites. On the 24 th. of each month a request for data form is sent to each site. Each site has an assigned due date that corresponds to the amount of time needed to complete the data requirements. A second form that contains the prior month's test results is also submitted with the request form. (See appendix E:69) The flow of data had a two day interval to allow for data entry time.

The other fields in the database were used to record monthly attendance from the spreadsheet as well as for the student's quarterly test scores for an entire year. The on campus test scores were obtained daily from a binder that the testing aide kept. The time required to build and maintain the database was approximately twenty hours per week.

Reports were generated each month. The totals were given in year-to-date figures, but were easily converted

into monthly figures when the prior months totals were subtracted from the current month's. A database program was written to obtain the totals needed to complete the report form. (See appendix F:72) The reports were given to the administrators to help in decision making. At the end of the 18 weeks of implementation the database contained almost 2,000 students.

STEP IV

The training of personnel to perform each specific task was performed as steps one through three were completed. All aides who worked with the project needed to be trained.

First an aide was trained to use the time card program, named TIMEMERG, to perform the task of calculating the time cards. Since the program was designed to be user-friendly, the aide was able to work independently within approximately 15 minutes. Often the time cards had multiple punches for one day. The aid was taught to verify these cards very carefully because this was the most likely place for an error to occur.

The second form of training involved an aide to input the computed times taken from the time cards. The

aide recorded the hours and minutes of each day into the spreadsheet, across from the student's name and in the columns that corresponded to the date written on the time card. The aide learned to print the weekly spreadsheets and the monthly totals, too.

The third area of training was the database, which was much more involved. The aide selected to build the database was carefully chosen. The inputting of information to build the database from the registration form and data sheet was quickly learned. For the fields that required codes a list was provided for reference. These code lists became part of the reference manual. The aide needed continuous training in the area of extracting information from the database do to the complex nature of this task. This training was carried on for the full eighteen weeks of implementation. All aids were trained to perform a computer backup each day. Three disks were rotated in a pattern of a Monday through Friday, Tuesday or Thursday, and Monday, Wednesday, or Friday. The two appropriate disks were chosen for a daily backup. A total of six aides were trained on the computer for the three types of data entry. Each

position had a backup person who took over if the other was not available.

STEP V

The fifth step was to create a manual. The creation of the manual evolved as the first three steps were completed and while the training was taking place. The manual aided in the understanding of the overall purpose through an overview of the practicum project. Each area was thoroughly addressed and examples were given when necessary.

The manual began with an overview of the system procedures and explained a little about each procedure. How to start the computer, information on entering the three programs, backup procedures, and shut down procedures were entered first. The database structure, field type, the allotted size of each field, and an example of data to be input was listed for the 100 fields. Fields like site, birthplace, reason for leaving, and program codes required code sheets. Each were placed in the back of the manual for easy reference.(See Appendix G:77)

STEP VI

The sixth and final step was to make provisions for monitoring the entire process. The monitoring process occurred in various ways.

First, through writer observation, a routine was established and followed. Two to three times a week informal meetings were held with the aides on a one-to-one basis. Each week a few randomly selected time cards were recalculated to check for computation errors. The spreadsheet was then checked against the calculated time written on the time cards. At the end of each month the monthly totals from the spreadsheet were verified for accuracy of input into the database. Each month the database was examined for missing data. A list of the missing data was printed and given to an aide to supply the missing data. Other monitoring tasks were performed on an as-needed basis.

The materials that were made available for the project were an IBM PS/2 Model 30 computer. The hardware components were a 30 megabyte hard drive, a three and a half inch internal floppy drive, a five and a quarter external floppy drive, a color monitor, and a 101 key keyboard. An adequate supply of disks and computer paper were made available.

There were some major hardware problems encountered during the implementation phase. In September the color monitor failed and was replaced with an old monitor that continually changed colors. In October the hard drive became totally unreliable. The database and spreadsheet was transferred to another computer belonging to another area of the adult education department until a decision could be made about the replacement or repair of the hard drive. Replacement was not possible, so the hard drive was reformatted and was to be used until another computer system was available.

The implementation phase allowed the opportunity to gather information for analysis. An interview with the senior learning manager revealed that the manual calculations of time cards required approximately 26 hours per week, and an additional 15 hours per week were required to record the times in a book. Other information was gathered from the interviews that will be addressed later. A questionnaire was distributed for feedback about the student management system. (See Appendix H:77)

CHAPTER IV

RESULTS

EVALUATION

A plan was created and evaluated using these evaluation tools. 1) writer evaluation, 2) interview with the supervising learning manager and the administrators, 3) physical comparison of recorded data, both manual and computerized, and 4) a questionnaire, involving administrators, teachers, and aides. The questionnaire was created to address most of the objectives. To determine the success of this project, the writer will present the evidence available to meet the objectives listed below.

1. One hundred percent of management will agree that the project will assist in obtaining student information in greater detail, thus allowing for more informed decision making.
2. Forty percent of the instructional staff will request information to aid in appropriate student interaction.
3. Fifty percent of the aides will report a reduction of paperwork.

4. Twenty percent of the aides will have acquired new skills, such as using a spreadsheet and a database, while working with the management information system.
5. Sixty percent less time will be required to calculate the time cards with of the use of the BASIC program.
6. Eighteen percent increase in accuracy will be reported when compared to the manual method of calculating time cards.
7. Sixty percent less time will be required to produce reports and with 20 percent greater accuracy.
8. Thirty percent greater accuracy will be reported when the spreadsheet is used to record attendance and produce weekly and monthly statistical analysis of student attendance.

Both of the administrators responded to the questionnaire. The questionnaire provided the data to obtain the evidence that 100 percent of the administrators did agree that the project assisted in

obtaining information in detail that allowed for more informed decision making. Objective number one was met.

Sixteen of the 38 teachers responded to the questionnaire. The response was surprisingly poor. The questionnaire did not provide adequate data for the objective. Thus 40 percent of the staff did not request information as stated in the objective. Objective number two was not met.

All 11 of the aides responded to the questionnaire. Eighty-nine percent of the aides reported a reduction of paperwork. That was 39 percent more than the 50 percent stated in the objective. Objective number three was met.

Six of the 11 aides were trained to perform a task related to the project. The response to the questionnaire showed that 27 percent of the aides felt they learned a new skill while working with the management information system. That exceeded the 20 percent stated in the goal. Objective number four was met.

Objective number five was to demonstrate that 60 percent less time was required to calculate the time cards, with the use of the BASIC computer program. An interview with the senior learning manager disclosed that

about 26 hours per week were required to manually calculate time cards. The time required calculate the time cards using the computer was five hours per week. Actually 80 percent less time was required. Objective number five was met.

Random samples of time cards were selected from both previously hand calculated and computer calculated time cards. The objective was an 18 percent increase in accuracy in computer computations. From the 20 hand calculated time cards, four had computation errors. The 20 computer calculated time cards had no calculation errors. This is a 20 percent increase in accuracy. Objective number six was met.

Reports were created monthly and on an as- requested basis by an administrator. The objective stated that 60 percent less time would be required to produce reports. The questionnaire revealed an average of 55 percent less time was required to produce these reports. One administrator, who worked closely with the teachers and aides stated 80 percent less time was required. The other administrator stated 30 percent less time was required. Objective number seven was not met.

The spreadsheet created with the computer was compared to the manual attendance that was recorded in a book. The objective was a greater accuracy rate of 30 percent to be obtained. The month of September was used for a random sampling. Twenty names in five different programs were selected. There were two errors in the manual recording of attendance and no error in the computer created spreadsheet. There was 10 percent greater accuracy obtained. Objective number eight was not met.

CHAPTER V

RECOMMENDATIONS

The program has become an integral part of the adult education department and will continue to be so. The student information system has proven to be an effective tool for administrators.

It is strongly felt that this program should also become an integral part of all the other areas within the adult education department. After talking with other program coordinators within the department, the adult high school may be the next area to adopt this program. Since the program is fully functional the techniques can be emulated with little difficulty. It was envisioned this program structure would encompass all of the adult students from all areas within the developmental education department.

The success of this program will be shared with other departments and copies of the manual will be made available. The writer will perform a demonstration, or give consultation and guidance when needed.

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Appendices

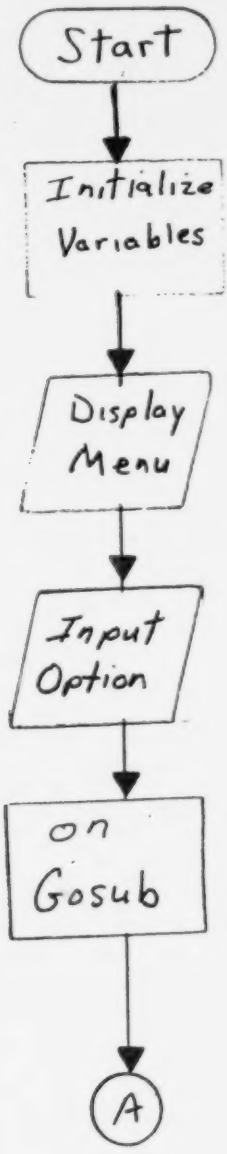
Appendix A

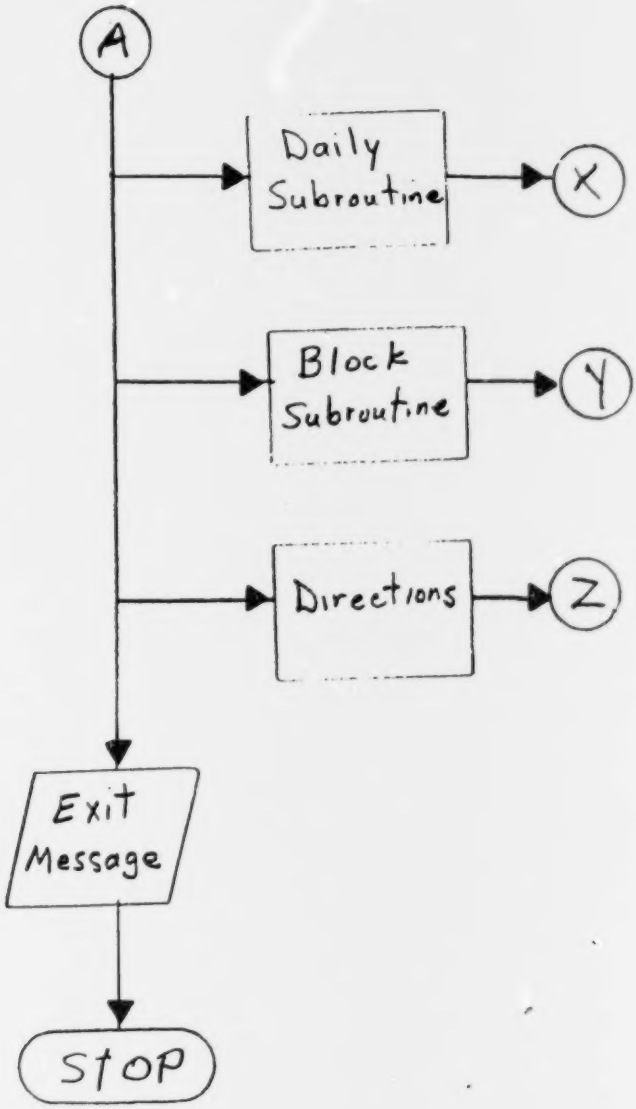
Basic Computer Program Components

Pseudocode for Timemerg

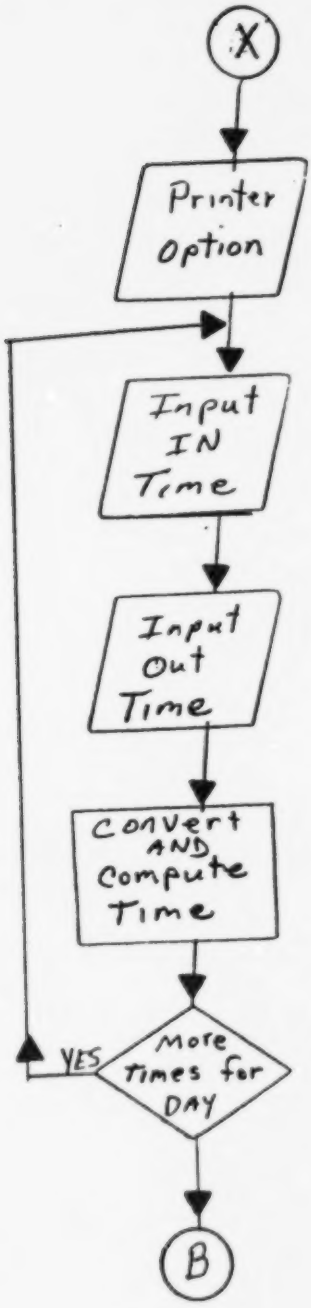
1. Create a menu.
2. Make options - daily or block of time computations, offer directions, and away to exit the program.
3. Create a subroutine for each option.
4. Create error checking routines that search for invalid times. Print error messages.
5. Convert times into a 24 hour format internally.
6. Make the program user friendly.

Flowchart for Timemerg

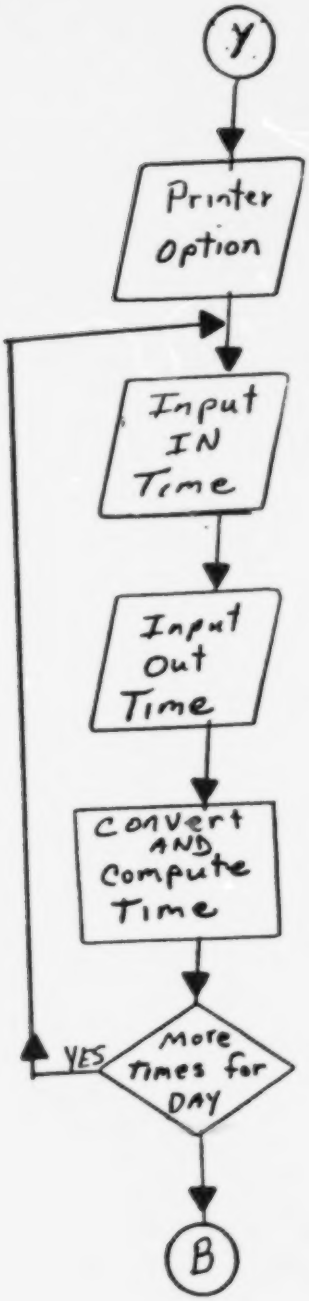



A
Daily Subroutine
X
Block Subroutine
Y
Directions
Z
Exit Message
STOP

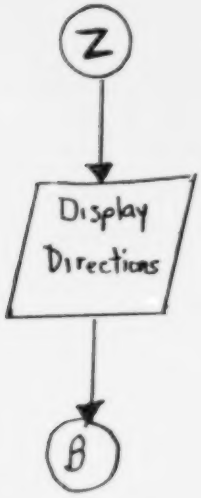
Daily Subroutine

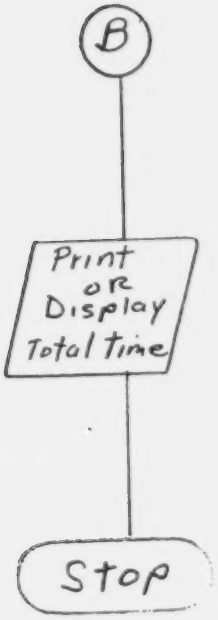


Block Subroutine



Directions Subroutine




B
Print
or
Display
Total time
Stop

```
100 REM*************************************************************************
110 REM WRITTEN BY:  GAY A. GROSS
120 REM DATE WRITTEN:  JULY 20, 1991
130 REM THIS PROGRAM COMPUTES TIME FROM TIME CARDS.
140 REM AN OPTION OF A SCREEN DISPLAY OR HARD COPY IS AVAILABLE.
150 REM THE TIME CARDS CAN BE COMPUTED DAILY OR BY ANY BLOCK OF TIME.
160 REM S$ = MORE TIMES FOR SAME PERSON
170 REM A1$ = AM OR PM, A2$ = AM OR PM
180 REM H1 = HOUR IN, M1 = MINUTES IN
190 REM H2 = HOURS OUT, M2 = MINUTES OUT
200 REM T = TIME IN HOURS AND MINUTES
210 REM ST = ACCUMULATOR FOR TIME
220 REM NA$ = NAME ON TIME CARD
230 REM A1$ = AM OR PM, A2$ = AM OR PM
240 REM TC = COUNTER FOR CALCULATING HOURS
250 REM C$ = CONTINUE, D$ = DIRECTION CHOICE, B$ = INKEY$
260 REM*************************************************************************
270 CLS
280 LOCATE 6,30: PRINT "TIME CARD COMPUTATIONS"
290 LOCATE 8,35:PRINT "MENU"
300 LOCATE 10,25:PRINT"1.  COMPUTE DAILY TIME"
310 LOCATE 11,25:PRINT"2.  COMPUTE A BLOCK OF TIME"
320 LOCATE 12,25:PRINT"3.  DISPLAY DIRECTIONS"
330 LOCATE 13,25:PRINT"4.  QUIT"
340 LOCATE 15,25:INPUT"SELECT OPTION 1-4:  ",SN
350 ON SN GOSUB 450,1050,1640,370
360 GOTO 270
370 CLS
380 LOCATE 10,20:PRINT "YOU HAVE SUCCESSFULLY EXITED THE PROGRAM"
390 LOCATE 13,18:PRINT "TYPE  'SYSTEM'  TO RETURN TO THE DOS PROMPT"
400 LOCATE 14,38:PRINT "OR"
410 LOCATE 15,20:PRINT "TYPE  'RUN'  TO START THE PROGRAM AGAIN"
420 END
430 REM*************************************************************************
440 '   SUBROUTINE TO COMPUTE DAILY TIME
450 CLS
460 ST = 0
470 LOCATE 1,20:PRINT "COMPUTE DAILY TIME CALCULATIONS"
480 LOCATE 3,10:INPUT "DO YOU NEED THIS PRINTED (Y or N)";PI$
490 IF PI$="Y" OR PI$="y" OR PI$="N" OR PI$="n" THEN 500 ELSE 480
500 IF PI$="Y" OR PI$="y" THEN PI$="YES"
510 IF PI$="N" OR PI$="n" THEN PI$="NO"
520 REM ENTER TIMES
530 LOCATE 5,5:INPUT "STUDENT'S NAME:  ",NN$:IF PI$="YES" THEN LPRINT NN$
540 PRINT:PRINT TAB(5)"TIME IN"
550 INPUT "HOUR"; H1: IF H1 <=0 OR H1 > 12 THEN 550
560 INPUT "MINUTES"; M1: IF M1 < 0 OR M1 > 59 THEN 560
570 INPUT "TYPE  A  FOR AM  or  P  FOR PM"; A1$
580 IF A1$ ="A" OR A1$="a" OR A1$="P" OR A1$="p" THEN 590 ELSE 570
590 IF PI$="YES" THEN LPRINT USING"##:## \ \"; H1;M1;A1$
600 REM TIME OUT
610 PRINT:PRINT TAB(5)"TIME OUT"
620 INPUT "HOUR"; H2: IF H2 <=0 OR H2 > 12 THEN 620
630 INPUT "MINUTES"; M2: IF M2 < 0 OR M2 > 59 THEN 630
640 INPUT "TYPE  A  FOR AM  OR  P  FOR PM"; A2$
650 IF A2$="A" OR A2$="a" OR A2$="P" OR A2$="p" THEN 660 ELSE 640
660 IF PI$="YES" THEN LPRINT USING"##:## \ \"; H2;M2;A2$:LPRINT
670 REM*************************************************************************

680 REM          COMPUTE TIMES
690 '   CHANGES 12 HOUR MODE INTO 24 HOUR MODE
700 IF A1$ = "P" AND H1<12 OR A1$ = "p" AND H1<12 THEN H1 = H1 + 12
710 IF A2$ = "P" AND H2<12 OR A2$ = "p" AND H2<12 THEN H2 = H2 + 12
720 H1 = H1 * 60 + M1 : REM CHANGES TO MINUTES
```

```
730 H2 = H2 * 60 + M2 : REM CHANGES HOURS TO MINUTES
740 REM FINDS DIFFERENCES BETWEEN TIMES IN MINUTE FORM
750 T=H2-H1:IF T<0 THEN PRINT TAB(15)"***** ERROR IN TIME ENTRY *****":TC=0:T=0:
ST=0:H1=0:H2=0:M1=0:M2=0:LPRINT "*** ERROR IN TIME ENTRY ***"
760 PRINT:PRINT
770 IF H1=0 AND H2=0 THEN 450
780 INPUT"DO YOU HAVE MORE TIMES FOR THE DAY (Y  OR  N)";S$
790 IF S$ = "N" OR S$ = "n" THEN T = T + ST: GOTO 810
800 ST = ST + T:GOTO 540
810 TC = 0 : REM COUNTER FOR NUMBER OF HOURS
820 REM LOOP USED TO COUNT HOURS
830 FOR X = 1 TO 25
840 IF T <60 THEN 880
850 T = T - 60
860 TC = TC + 1
870 NEXT X
880 T = T - .005
890 IF T<0 THEN T=0
900 REM           ***** PRINT OPTION *****
910 PRINT
920 P$ = "\              \  ## \         \  ## \        \"
930 IF PI$="YES" THEN 970
940 PRINT NN$
950 PRINT USING P$;"TIME ATTENDED",TC," HOURS AND ",T," MINUTES"
960 GOTO 990
970 LPRINT USING P$;"TIME ATTENDED",TC," HOURS AND ",T," MINUTES"
980 PRINT:LPRINT:LPRINT
990 REM START ANOTHER PERSON
1000 INPUT "DO YOU WANT TO COMPUTE ANOTHER TIME CARD ( Y  or  N)"; C$
1010 IF C$="Y" OR C$="y" THEN 450
1020 RETURN
1030 REM*****************************************************************************
1040 '  SUBROUTINE TO COMPUTE A BLOCK OF TIME
1050 CLS
1060 ST = 0
1070 LOCATE 1,29:PRINT "COMPUTE A BLOCK OF TIME"
1080 LOCATE 3,10:INPUT "DO YOU NEED THIS PRINTED (Y or N) ";PS$
1090 IF PS$="Y" OR PS$="y" OR PS$="N" OR PS$="n" THEN 1100 ELSE 1080
1100 IF PS$="Y" OR PS$="y" THEN PS$="YES"
1110 IF PS$="N" OR PS$="n" THEN PS$="NO"
1120 LOCATE 5,5:INPUT "STUDENT'S NAME:  ";NA$ :IF PS$="YES" THEN LPRINT NA$
1130 '   ENTER TIMES
1140 PRINT TAB(10) "TIME IN":PRINT
1150 INPUT "HOUR"; HH1: IF HH1 <=0 OR HH1 > 12 THEN 1150
1160 INPUT "MINUTES"; MM1: IF MM1 < 0 OR MM1 > 59 THEN 1160
1170 INPUT "TYPE  A  FOR AM  or  P  FOR PM"; AA1$
1180 IF AA1$ = "P" AND HH1<12 OR AA1$ = "p" AND HH1<12 THEN HH1 = HH1 + 12
1190 IF AA1$ ="A" OR AA1$="a" OR AA1$="P" OR AA1$="p" THEN 1200 ELSE 1170
1200 IF PS$="YES" THEN LPRINT USING"##:## \ \; HH1;MM1;AA$
1210 REM      TIME OUT
1220 PRINT:PRINT TAB(5) "TIME OUT"
1230 INPUT "HOUR"; HH2: IF HH2 <=0 OR HH2 > 12 THEN 1230
1240 INPUT "MINUTES"; MM2: IF MM2 < 0 OR MM2 > 59 THEN 1240
1250 INPUT "TYPE  A  FOR AM  OR  P  FOR PM"; AA2$
1260 IF AA2$="A" OR AA2$="a" OR AA2$="P" OR AA2$="p" THEN 1300 ELSE 1250
1270 IF PS$="YES" THEN LPRINT USING"##:## \ \"; HH2;MM2;AA2$:LPRINT
1280 REM*****************************************************************************
1290 '    COMPUTE TIMES
1300 IF AA1$ = "P" AND HH1<12 OR AA1$ = "p" AND HH1<12 THEN HH1 = HH1 + 12
1310 IF AA2$ = "P" AND HH2<12 OR AA2$ = "p" AND HH2<12 THEN HH2 = HH2 + 12
1320 HH1 = HH1 * 60 + MM1 : REM  *** CHANGES 'IN TIME' HOURS TO MINUTES ***
1330 HH2 = HH2 * 60 + MM2 : REM *** CHANGES 'OUT TIME' HOURS TO MINUTES ***
1340 REM **** FINDS DIFFERENCES BETWEEN TIMES IN MINUTE FORM ***
1350 PRINT:PRINT
```

```
1360 TT=HH2-HH1:IF TT<0 THEN PRINT TAB(15)"***** ERROR IN TIME ENTRY *****";TTC=
0:TT=0:SST=0:HH1=0:HH2=0:MM1=0:MM2=0:LPRINT "*** ERROR IN TIME ENRTY ***"
1370 PRINT:PRINT
1380 IF HH1=0 AND HH2=0 THEN 1140
1390 REM REQUEST MORE TIMES FOR THE SAME PERSON
1400 INPUT"DO YOU HAVE MORE TIMES FOR THIS PERSON? (Y  OR  N)";SS$
1410 IF SS$ = "N" OR SS$ = "n" THEN TT = TT + SST: GOTO 1430
1420 SST = SST + TT : GOTO 1130 : REM CREATES A SUBTOTAL AND GETS MORE TIMES
1430 TTC = 0 : REM COUNTER FOR NUMBER OF HOURS
1440 REM LOOP USED TO COUNT HOURS
1450 FOR X = 1 TO 250
1460 IF TT <60 THEN 1500
1470 TT = TT - 60
1480 TTC = TTC + 1
1490 NEXT X
1500 TT = TT - .005
1510 IF T<0 THEN T=0
1520 PRINT:LPRINT:LPRINT:LPRINT
1530 P$ = "\              \  ## \         \  ## \        \"
1540 PRINT;NA$
1550 PRINT TAB(8) USING P$;"TIME ATTENDED",TTC," HOURS AND ",TT," MINUTES."
1560 LPRINT TAB(8) USING P$;"TIME ATTENDED",TTC," HOURS AND ",TT," MINUTES"
1570 PRINT:LPRINT:LPRINT
1580 REM START WITH A NEW NAME BELOW
1590 INPUT "DO YOU WANT TO COMPUTE MORE TIME CARDS ( Y  or  N)"; CC$
1600 IF CC$ = "Y" OR CC$ = "y" THEN 1050
1610 RETURN
1620 REM*****************************************************************************

1630 REM   SUBROUTINE TO PRINT THE DIRECTIONS
1640 REM DIRECTIONS FOR TIME CARD COMPUTATIONS
1650 CLS
1660 LOCATE 2,25:PRINT "DIRECTIONS FOR COMPUTING TIME CARDS"
1670 LOCATE 3,2:PRINT "READ THE `IN TIME' FROM THE TIME CARD."
1680 LOCATE 4,2:PRINT "ENTER THE HOUR, PRESS THE ENTER KEY, THEN ENTER THE MINUT
ES"
1690 LOCATE 5,2:PRINT "ENTER  A  FOR AM  OR  P  FOR PM.  PRESS THE ENTER KEY."
1700 LOCATE 7,2:PRINT "READ THE `OUT TIME' FROM THE TIME CARD."
1710 LOCATE 8,2:PRINT "ENTER THE HOUR, PRESS THE ENTER KEY, THEN ENTER THE MINUT
ES"
1720 LOCATE 9,2:PRINT "ENTER   A  FOR AM  OR  P  FOR PM.  PRESS THE ENTER KEY."
1730 LOCATE 11,2:PRINT "FOLLOW THE DIRECTIONS ON THE SCREEN AS THEY APPEAR TO"
1740 LOCATE 12,2:PRINT "CONTINUE ENTERING TIME FROM THE TIME CARDS."
1750 LOCATE 14,2:PRINT "IF AN ERROR MESSAGE OCCURS, ALL THE TIMES MUST BE REENTE
RED FOR THAT PERSON"
1760 LOCATE 17,20:PRINT "PRESS ANY KEY TO RETURN TO THE MENU"
1770 B$=INKEY$:IF B$="" THEN 1770
1780 RETURN
```

Appendix B

Spreadsheet sample printout

R

OCT91

ATTENDANCE FOR AEC 1991
FALL SEMESTER
OCTOBER 1991

NAME	MON		TUE		WED		THU		FRI		WEEKLY TOTALS	
			1		2		3		4			
	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN
ARNOLD, SARA			4	3	5	21	6	23	2	36	18	23
DALL, TOM			7	33	2	45					10	18
HALL, AMY			1	14	8	0	7	57	5	49	23	0
MARTIN, MARY			6	47	6	12	6	26	4	58	24	23
RESOTA, FRANK			5	0			5	25	5	24	15	49
ZOE, ANNIE			3	28	2	18	3	52	3	33	13	11

ALL NAMES ARE FICTITIOUS

OCT91

ATTENDANCE FOR AEC 1991
FALL SEMESTER
OCTOBER 1991

NAME	MON		TUE		WED		THU		FRI		WEEKLY TOTALS	
	7		8		9		10		11			
	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN
ARNOLD, SARA	2	22	2	33	2	22	5	56	5	25	18	38
DALL, TOM	3	0	5	22	4	54	3	22	2		18	38
HALL, AMY			6	6	8	25	1	54		55	17	20
MARTIN, MARY	6	10	4	24	6	19	7	24	5	57	30	14
RESOTA, FRANK			8	28			5	19	4	25	18	12
ZOE, ANNIE	3	22	5	34	4	17	4	17	8	0	25	30

ALL NAMES ARE FICTITIOUS

OCT91

ATTENDANCE FOR AEC 1991
FALL SEMESTER
OCTOBER 1991

NAME	MON		TUE		WED		THU		FRI		WEEKLY TOTALS	
	14		15		16		17		18			
	HR	MIN	5	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN
ARNOLD, SARA	5	:59	2	: 25	4	12	2	:32	5	:54	21	: 2
DALL, TOM	1	:24	4	: 23	2	:23		:25	2	:15	10	: 50
HALL, AMY	9	: 0	7	: 54	6	:34	3	:25	4	:12	31	: 5
MARTIN, MARY	2	:58	3	: 24	8	:45	4	:29	6	:44	26	: 20
RESOTA, FRANK	4	:24	5	: 15	1	:56	8	:18	4	:33	24	: 26
ZOE, ANNIE	8	:22	5	: 48	2	:27	2	:11	4	:25	23	: 13

ALL NAMES ARE FICTITIOUS

OCT91

ATTENDANCE FOR AEC 1991
FALL SEMESTER
OCTOBER 1991

NAME	MON 21		TUE 22		WED 23		THU 24		FRI 25		WEEKLY TOTALS	
	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN
ARNOLD, SARA	5	:55	2	: 33	2	22	5	:56	5	:25	22	: 11
DALL, TOM	6	:21	5	: 22	4	:54	3	:22	2	:	21	: 59
HALL, AMY	8	:53	6	: 6	8	:25	1	:54		:55	26	: 13
MARTIN, MARY	5	:24	4	: 24	6	:19	7	:24	5	:57	29	: 28
RESOTA, FRANK	6	:25	8	: 28		:	5	:19	4	:25	24	: 37
ZOE, ANNIE	1	:55	5	: 34	4	:17	4	:17	8	: 0	24	: 3

ALL NAMES ARE FICTITIOUS

OCT91

ATTENDANCE FOR AEC 1991
FALL SEMESTER
OCTOBER 1991

NAME	MON		TUE		WED		THU		FRI		WEEKLY TOTALS	
	28		29		30		31					
	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN	HR	MIN
ARNOLD, SARA	6	:21	4	: 23	5	21	6	:23		:	22	: 28
DALL, TOM		:45	7	: 25	2	:45		:		:	10	: 55
HALL, AMY	7	: 0	1	: 24	8	: 0	7	:57		:	24	: 21
MARTIN, MARY	6	:12	6	: 54	6	:12	6	:26		:	25	: 44
RESOTA, FRANK	5	:10	5	: 22		:	5	:25		:	15	: 57
ZOE, ANNIE	3	:18	3	: 29	2	:18	3	:52		:	12	: 57

ALL NAMES ARE FICTITIOUS

OCT91

ATTENDANCE FOR AEC 1991
FALL SEMESTER
OCTOBER 1991

NAME	MONTHLY TOTALS HR	MIN
ARNOLD, SARA	102 :	42
DALL, TOM	71 :	40
HALL, AMY	121 :	59
MARTIN, MARY	136 :	9
RESOTA, FRANK	99 :	1
ZOE, ANNIE	98 :	54

ALL NAMES ARE FICTITIOUS

Appendix C

Student Registration and Data Forms

INDIAN RIVER COMMUNITY COLLEGE
REGISTRATION INFORMATION - ADULT EDUCATION
(AHS, GED, ABE, ESL)

Date _____

YEAR _____ **Semester: Fall** _____ **Spring** _____ **Summer I** _____ **Summer II** _____

Social Security Number ☐☐☐ - ☐☐ - ☐☐☐☐

Name ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ (Last) ☐☐☐☐☐☐☐☐☐☐ (First) ☐☐☐☐☐☐☐ (Middle/Maiden)

Permanent Address (all correspondence will be mailed to this address)

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ (street address) ☐☐☐☐☐☐☐☐☐☐ (city) ☐☐ (state) ☐☐☐☐☐ (zip code)

Telephone ☐☐☐☐☐☐☐ **Area Code**

Sex ☐ 1 Male 2 Female

Residency 8 0 8 0 (Office Use Only) ☐☐

Date of Birth ☐☐ - ☐☐ - ☐☐ Month Date Year

Place of Birth _____ State Country (Office Use Only)

Admission Date - First Term enrolled for college credit ☐☐☐ (Office Use Only)

Entrance Status ☐
1 High School Graduate 3 GED
2 College Transfer 4 Other

Ethnic Origin (required by US Dept. of HEW) ☐
1. White
2. Asian or Pacific Islander
3. American Indian or Alaskan Native
5. Black, non-Hispanic
6. Hispanic

Citizenship ☐ : 1 U.S. Citizen 2 Resident Alien #_____ 7 Other Foreign

Are you a high school graduate?_____ Date graduated_____

High school graduated from _____

City _____ State _____

Did you receive a GED? _____ Date received _____ ☐☐☐☐☐☐ (Office Use Only)

Classification ☐7☐ Non Degree Seeking

GOAL CODE 7 **MAJOR CODE** 99999

Please select the Goal Code which best describes the reason for your taking each course.

A Achieve basic literacy (A.B.E. or E.S.L.)
B To earn a high school diploma or its equivalent (G.E.D. or A.H.S.)

Title of Course/Number	Section	Goal Code
1.		
2.		
3.		
4.		
5.		

How did you you learn about this course these courses?

_____ a Via an advertisement
_____ b from friends relatives
_____ c from an employer
_____ d other (please list _____)

1. Are you currently employed?
_____ yes _____ no
2. If yes, from the list to the right circle the number of your occupation (1-7)

_____
Student's Signature

_____
Counselor's Signature

OCCUPATION

1 Agriculture
2 Distributive
3 Health
4 Home Economics
5 Office
6 Trade and Industrial
7 Public Service

EXAMPLE

Landscaping
Advertising, sales, hotel & restaurant management
Nursing, x-ray technician, EMT
Homemaking, child care, clothing and textiles
Business, data processing, secretarial
Electronics, mechanics, construction, metal-working, drafting, A.C repair
Fire, science, law enforcement, social work, teacher's aide

IRCC 499 (Rev. 3/91)

NAME _____ M ___ F ___

ADDRESS _____

CITY _____ ZIP _____

TELEPHONE NUMBER ( )_____

WHY ARE YOU HERE? GED PREP _____ GED REGISTERED _____ (mo.)

ACADEMIC SELF IMPROVEMENT_____

OTHER: _____

WERE YOU FORMERLY AN AEC STUDENT? YES _____ NO _____

IF YES, DATE ATTENDED: MONTH _____ YEAR _____

DO YOU HAVE ANY HANDICAPS WE SHOULD KNOW ABOUT? YES _____ NO _____

IF YES, PLEASE SPECIFY _____

INTERVIEW DATE _____ LEARNING MANAGER'S SIGNATURE _____

NO 90 0 – 59
NO 91 60 – 89
NO 55 90 – 130
LIT ___ ABE ___ GED ___

SOCIAL SECURITY NUMBER ___ ___ ___ - ___ ___ - ___ ___ ___ ___

BIRTHDATE: ___ / ___ / ___ AGE _____

U. S. CITIZEN? YES _____ NO _____ OTHER: _____

RESIDENT ALIEN # _____ STATUS _____

MARITAL STATUS (CIRCLE ONE): SINGLE MARRIED SEPARATED DIVORCED WIDOWED

ETHNIC GROUP (CIRCLE ONE): BLACK HISPANIC WHITE OTHER: _____

HIGH SCHOOL GRADUATE? YES _____ YEAR _____

NO _____ LAST GRADE COMPLETED _____ YEAR _____

HOW MANY CREDIT HOURS _____

DO YOU HAVE A GED? NO _____ YES _____ YEAR _____

WHAT JOB DO YOU WANT IN THE FUTURE? _____

SIGNATURE: _____

(COMMENTS) _____

Hours Attendance			
Month	TERM	199	199
May	SSI		
June			
June	SSII		
July			
Aug			
Aug	FALL		
Sept			
Oct			
Nov			
Dec			
Jan	SPRING		
Feb			
Mar			
Apr			
TOTAL			

(T.A.B.E. TESTING RECORD)

INITIAL LOCATOR SCORES: READING _____ MATH _____

TESTING DATE MO	DY	YR	TABE FORM #	READ VOC	READ COMP	TOT READ	MATH CMP	MATH C&A	TOT MATH	LANG MECH	LANG EXPR	TOT LANG	SP	TOTAL SATTERY
							-							

Evaluation Submitted: _____ Date _____

Passed GED

Date _____

CHECK THE APPROPRIATE PROGRAM: _____

___ MIG ___ PI ___ JTPA ___ VR ___ DL ___ DOC ___ NH

IRCC-242B (Rev. 4-91)

_____
LAST NAME FIRST

65

Appendix D

Database Structure

Structure for database: C:stu9192.dbf
Number of data records: 81
Date of last update : 11/28/91

Field	Field Name	Type	Width	Dec
1	DATE	Date	8	
2	SITE	Numeric	2	
3	OPERATOR	Character	13	
4	SS_NUMBER	Character	11	
5	L_NAME	Character	17	
6	F_M_NAME	Character	17	
7	STREET	Character	25	
8	CITY	Character	15	
9	STATE	Character	2	
10	ZIP	Character	5	
11	PHONE	Character	8	
12	SEX	Character	1	
13	BIRTHDATE	Date	8	
14	BIRTHPLACE	Character	5	
15	ADMIT_DTE1	Character	5	
16	COURSE1_1	Character	15	
17	COURSE1_2	Character	15	
18	COURSE1_3	Character	15	
19	COURSE1_4	Character	15	
20	COURSE1_5	Character	15	
21	ADMIT_DTE2	Character	5	
22	COURSE2_1	Character	15	
23	COURSE2_2	Character	15	
24	COURSE2_3	Character	15	
25	COURSE2_4	Character	15	
26	COURSE2_5	Character	15	
27	ADMIT_DTE3	Character	5	
28	COURSE3_1	Character	15	
29	COURSE3_2	Character	15	
30	COURSE3_3	Character	15	
31	COURSE3_4	Character	15	
32	COOURSE3_5	Character	15	
33	ADMIT_DTE4	Character	5	
34	COURSE4_1	Character	15	
35	COURSE4_2	Character	15	
36	COURSE4_3	Character	15	
37	COURSE4_4	Character	15	
38	COURSE4_5	Character	15	
39	ENT_STATUS	Character	1	
40	LEAVE_DATE	Date	8	
41	REASON_CDE	Numeric	2	
42	ETHNIC_ORG	Character	1	
43	CITIZENSHP	Character	1	
44	GOAL_CODE	Character	1	
45	HOW_LEARN	Character	1	
46	EMPLOYED	Character	1	
47	WHY_HERE	Character	1	
48	FORMER_AEC	Character	1	
49	FORMER_DAT	Character	5	
50	HANDICAPS	Character	1	
51	RES_ALIEN	Character	12	
52	MARITAL_ST	Character	1	
53	PROGRAM1	Numeric	2	
54	PROGRAM2	Numeric	2	
55	JUNE_S291	Numeric	3	
56	JULY S2	Numeric	3	

57	AUG_S2	Numeric	3	
58	AUG	Numeric	3	
59	SEPT	Numeric	3	
60	OCT	Numeric	3	
61	NOV	Numeric	3	
62	DEC	Numeric	3	
63	JAN	Numeric	3	
64	FEB	Numeric	3	
65	MAR	Numeric	3	
66	APR	Numeric	3	
67	MAY_S1	Numeric	3	
68	JUNE_S1	Numeric	3	
69	LOC_READ	Character	1	
70	LOC_MATH	Character	1	
71	TEST1_DATE	Date	8	
72	T1_FORM	Character	3	
73	T1_T_READ	Numeric	4	
74	T1_T_MATH	Numeric	4	
75	T1_T_LANG	Numeric	4	
76	T1_TOT_BAT	Numeric	4	1
77	TEST2_DATE	Date	8	
78	T2_FORM	Character	3	
79	T2_T_READ	Numeric	4	
80	T2_T_MATH	Numeric	4	
81	T2_T_LANG	Numeric	4	
82	T2_TOT_BAT	Numeric	4	1
83	TEST3_DATE	Date	8	
84	T3_FORM	Character	3	
85	T3_T_READ	Numeric	4	
86	T3_T_MATH	Numeric	4	
87	T3_T_LANG	Numeric	4	
88	T3_TOT_BAT	Numeric	4	1
89	TEST4_DATE	Date	8	
90	T4_FORM	Numeric	4	
91	T4_T_READ	Numeric	4	
92	T4_T_MATH	Numeric	4	
93	T4_T_LANG	Numeric	4	
94	T4_TOT_BAT	Numeric	4	1
95	TEST5_DATE	Date	8	
96	T5_FORM	Character	3	
97	T5_T_READ	Numeric	4	
98	T5_T_MATH	Numeric	4	
99	T5_T_LANG	Numeric	4	
100	T5_TOT_BAT	Numeric	4	1
** Total **			679	

Appendix E

Request for Data Forms

REQUEST FORM

REQUEST FOR STUDENT DATA

SITE: _____ DUE DATE: _____ 19 _____

PLEASE SUBMIT THE DATA REQUESTED BELOW TO THE MAIN CAMPUS, ROOM 212. SEND THE PRIOR MONTH'S RECORDS; THE 1ST THROUGH THE 30TH/31ST.

_____ 1. REGISTRATION FORMS - ORIGINAL / COPIES

_____ 2. DATA - SHEETS COPIES
(NEW STUDENTS ONLY)

_____ 3. TEST SCORES - MONTHLY TEST SUMMARY FORMS PROVIDED (SURVEY AND POST-TEST)

_____ 4. ATTENDANCE FOR THE MONTH

_____ 5. CDL - COMPLETERS

_____ 6. ESL - STUDENTS WHO COMPLETED A CLASS (BEGINNING, INTERMEDIATE, HIGH INTERMEDIATE, OR ADVANCED)

_____ 7. OTHER -

COMMENTS:

PLEASE MAKE SURE ALL MATERIALS ARE READABLE.

USE THIS AS A COVER SHEET FOR THE DATA REQUESTED.

SITE: _____ FOR THE MONTH OF: _____ 19 _____

MONTHLY TEST SUMMARY

STUDENT'S NAME LAST, FIRST	SS#	TEST TYPE SURVEY READ/MATH	TEST TYPE TABE #READ/MATH	DATE OF TEST	TEST SCORE TOTALS TOTAL READING	TOTAL MATH	TOTAL LANGUAGE	TOTAL BATTERY
Examples:								
Doe, John	123-45-6789	EH		8-3-91	7.2	8.1	6.1	7.1
Smith, Mary	456-78-9999		SMD	8-4-91	12.9	9.3	11.9	11.4

Appendix F

Monthly Report Forms

MONTHLY DATABASE REPORT

FOR THE PERIOD ENDING ____/____/____

_____ Total student count.

Ethnic origin

_____ 1 = White
_____ 2 = Asian/Pacific Islander
_____ 3 = American Indian/Alaskan Native
_____ 4 = N/A
_____ 5 = Black, non-Hispanic
_____ 6 = Hispanic

Sex

_____ 1 = Male students
_____ 2 = Female students

Marital status

_____ 1 = Single
_____ 2 = Married
_____ 3 = Separated
_____ 4 = Divorced
_____ 5 = Widowed

Student count for each site.

_____ Site 1 - Main Campus (ABE/GED)
_____ Site 2 - Indian River Correctional Inst.
_____ Site 3 - Lincoln Park
_____ Site 4 - Martin County Correctional Inst.
_____ Site 5 - Work Place Literacy
_____ Site 6 - Okeechobee Campus
_____ Site 7 - Port St. Lucie High School
_____ Site 8 - St. Lucie Co. Correctional
_____ Site 9 - Windmill Point
_____ Site 10 - Okeechobee Co. Jail
_____ Site 11 - Prima Vista
_____ Site 12 - _____
_____ Site 13 - _____
_____ Site 14 - _____
_____ Site 15 - _____

GED Graduates

_____ Total
_____ Male
_____ Female

Student count for each program

_____ 1 = Driver's license
_____ 2 = New horizons
_____ 3 = HRS
_____ 4 = Commercial driver's license
_____ 5 = Project independence
_____ 6 = Vocational rehabilitation
_____ 7 = Migrant
_____ 8 = JTPA
_____ 9 = DATA
_____ 10 = DOC
_____ 11 = Prenatal
_____ 12 = ALPHA
_____ 13 = Multi resources
_____ 14 = Displace homemaker
_____ 15 = _____

Attendance hours for each site

_____ Site 1 - Main Campus (ABE/GED)
_____ Site 2 - Indian River Correctional Inst.
_____ Site 3 - Lincoln Park
_____ Site 4 - Martin County Correctional Inst.
_____ Site 5 - Work Place Literacy
_____ Site 6 - Okeechobee Campus
_____ Site 7 - Port St. Lucie High School
_____ Site 8 - St. Lucie Co. Correctional
_____ Site 9 - Windmill Point
_____ Site 10 - Okeechobee Co. Jail
_____ Site 11 - Prima Vista
_____ Site 12 - _____
_____ Site 13 - _____
_____ Site 14 - _____
_____ Site 15 - _____

_____ Total Post Test

```
*  REPORT1 IS THE NAME OF THIS PROGRAM

* THIS PROGRAM WILL PRINT OUT A MONTHLY REPORT
* USING THE APPROPRIATE DATA AND EXPLAINATION OF EACH.
* A VERTICAL PRINTOUT FORMAT WILL BE USED.
* DATA REPORTED IS YEAR-TO-DATE.

* WRITTEN BY GAY GROSS
* SEPTEMBER 30, 1991

* SET PRINT ON

USE STU9192
CLEAR
? "                         YEAR-TO-DATE REPORT"
? "                    FOR THE MONTH OF SEPTEMBER"
?
?

? 'TOTAL COUNT IS:  '
COUNT
?
? '   ETHNIC ORIGIN'
? 'WHITE'
COUNT FOR ETHNIC_ORG = "1"
? 'ASIAN OR PACIFIC ISLANDER'
COUNT FOR ETHNIC_ORG = "2"
? 'AMERICAN INDIAN OR ALASKAN NATIVE'
COUNT FOR ETHNIC_ORG = "3"
? 'BLACK'
COUNT FOR ETHNIC_ORG = "5"

? 'HISPANIC'
COUNT FOR ETHNIC_ORG = "6"
WAIT
CLEAR
? 'MALE STUDENTS'
COUNT FOR SEX = 1
? 'FEMALE STUDENTS'
COUNT FOR SEX = 2
WAIT
CLEAR
? 'MARITAL STATUS'
COUNT FOR MARITAL_ST = "1"
COUNT FOR MARITAL_ST = "2"
COUNT FOR MARITAL_ST = "3"
COUNT FOR MARITAL_ST = "4"
COUNT FOR MARITAL_ST = "5"
WAIT
CLEAR
? 'STUDENT COUNT FOR EACH SITE'
COUNT FOR SITE = 1
COUNT FOR SITE = 2
COUNT FOR SITE = 3
COUNT FOR SITE = 4
COUNT FOR SITE = 5
COUNT FOR SITE = 6
COUNT FOR SITE = 7
COUNT FOR SITE = 8
COUNT FOR SITE = 9
COUNT FOR SITE = 10
COUNT FOR SITE = 11
WAIT
```

```
CLEAR
? 'GED GRADUATES'
COUNT FOR REASON_CDE = 1
COUNT FOR REASON_CDE = 1 .AND. SEX = 1
COUNT FOR REASON_CDE = 1 .AND. SEX = 2
WAIT
CLEAR
? 'STUDENT COUNT FOR EACH PROGRAM'
COUNT FOR PROGRAM1 = 1
COUNT FOR PROGRAM2 = 1
?
COUNT FOR PROGRAM1 = 2
COUNT FOR PROGRAM2 = 2
?
COUNT FOR PROGRAM1 = 3
COUNT FOR PROGRAM2 = 3
?
COUNT FOR PROGRAM1 = 4
COUNT FOR PROGRAM2 = 4
?
COUNT FOR PROGRAM1 = 5
COUNT FOR PROGRAM2 = 5
WAIT
CLEAR
COUNT FOR PROGRAM1 = 6
COUNT FOR PROGRAM2 = 6
?
COUNT FOR PROGRAM1 = 7
COUNT FOR PROGRAM2 = 7
?
COUNT FOR PROGRAM1 = 8
COUNT FOR PROGRAM2 = 8
?
COUNT FOR PROGRAM1 = 9
COUNT FOR PROGRAM2 = 9
?
COUNT FOR PROGRAM1 = 10
COUNT FOR PROGRAM2 = 10
WAIT
CLEAR
COUNT FOR PROGRAM1 = 11
COUNT FOR PROGRAM2 = 11
?
COUNT FOR PROGRAM1 = 12
COUNT FOR PROGRAM2 = 12
?
COUNT FOR PROGRAM1 = 13
COUNT FOR PROGRAM2 = 13
?
COUNT FOR PROGRAM1 = 14
COUNT FOR PROGRAM2 = 14
WAIT
CLEAR


USE

* SET PRINT OFF
```

Appendix G

The Student Information System Manual

MANAGEMENT INFORMATION SYSTEM FOR ADULT EDUCATION STUDENTS

AN OVERVIEW OF SYSTEM PROCEDURES

Each student enrolling in the adult education program, completes a student registration form and a student data sheet. The student is then tested to determine a grade level in reading, math, and language. Testing is done at three month intervals.

The student is issued a time card that is to be punched each time the lab is entered or exited. Attendance is determined by the time card punches and recorded in a spreadsheet daily and into a database monthly.

Each new semester the student must re-enroll by completing a new registration sheet. This information must be verified with the information in the database and updated as necessary.

When a student leaves the program, the reason for the departure is determined and then entered into the database.

All pertinent data is recorded in the database and used at a later date to create reports and help in the decision making process to enhance the student's program of study.

CALCULATING THE TIME CARDS

Each student has a time card. The card is punched by a time clock each time the student enters and leaves the lab. The card may have multiple times recorded for one day.

The number of hours and minutes the student spends in the lab is calculated on a computer. The program is written in Beginner's All-purpose Symbolic Instructional Code (BASIC). This menu-driven program is named TIMEMERG. A choice of a screen display or a printout is available.

The menu offers the choice of computing daily, weekly, or another block of time.

The date and total hours are written on the time card. The time cards are computed each day for the prior day.

CREATING THE SPREADSHEET

The spreadsheet is a shell that needs to only have the students's names and daily attendance times entered. The spreadsheet will automatically calculate weekly and monthly totals. The daily time, taken from time card, is entered into a spreadsheet program named for the month and year it represents. The Lotus 123 program is used.

A report is printed weekly and monthly. These reports are kept in a binder for easy reference. The information from the monthly report is entered into the database.

BUILDING THE DATABASE

The database is created through the Foxbase Plus program. It consists of 95 fields. Each student is entered into the database. The back of this manual contains a list of all 95 fields and an explanation for each field with ample examples.

The data entered into the database is taken from the registration sheet, the student data sheet, all test results, and the attendance spreadsheet.

The database is updated as information becomes available.

PERFORMING THE BACKUP PROCEDURE

The back-up process is performed at the end of each daily input session. Both the database and the spread sheet are backed up.

The database uses a daily rotating disk system. The system consists of three back-up disks. Two are used each day. Back-up disk #1 is labeled Monday, Tuesday, Wednesday, Thursday, and Friday. It is used every day. Back-up disk #2 is labeled Monday, Wednesday, and Friday. It is used only on those days. Back-up disk #3 is labeled Tuesday and Thursday. It is used on those days only. Each day the database is backed up onto the two appropriate disks.

The spreadsheet is backed up only once because the data would not be difficult to reconstruct as would be the database. The spreadsheet back-up disks are labeled with the same name as the working disk except it has the words BACK-UP written on the label.

Command format to back-up files.
C:> COPY filename.ext A:
Insert the proper filename and its extension.
Place the back-up disk into drive A.

TURNING ON THE COMPUTER

Turn on the computer components in this order.

1. Plug the computer into the wall outlet.
2. Turn on the monitor, printer, and external disk drive.
3. Turn on the central processing unit (CPU).

SELECTING THE DIRECTORY

Type the following commands to use the desired program.

To calculate the time cards:

```
EXAMPLE:  CD\BASIC   (TO ENTER THE BASIC DIRECTORY)
          BASIC      (TO ENTER THE BASIC LANGUAGE)
          LOAD"TIMEMERG"    (TO ENTER THE PROGRAM)
```

To enter attendance times into the spreadsheet:

```
EXAMPLE:  CD\LOTUS     (TO ENTER THE LOTUS
                        DIRECTORY)
          123          (TO ENTER THE SPREADSHEET)
```

To enter data into the database:

```
EXAMPLE:  CD\FOX       (TO ENTER THE DATABASE
                        DIRECTORY)
          FOXPLUS      (TO ENTER THE DATABASE
                        PROGRAM)
```

TURNING OFF THE COMPUTER

Turn off the computer in the following order.

1. Turn off the central processing unit (CPU).
2. Turn off the monitor, printer, and external disk drive.
3. Park the hard drive heads by typing PARK <enter>.
4. Unplug the computer strip from the wall outlet.

CALCULATING TIME CARDS

Each day the time cards are collected from the various locations in the labs and taken to the computer for calculating.

The BASIC program TIMEMERG is to be loaded into the computer's memory. See the specific instructions as presented previously. Each time card is calculated one at a time and the total daily hours are written on the time card in ink. Each day the time card is dated with the month and the day next to the time clock punches.

The BASIC program offers directions each time the program is run. The directions are simple to read and follow. An option of printing the total time on the screen or the printer is offered.

CREATING THE SPREADSHEET

The spreadsheet consists of a shell that allows for the input of attendance times. The spreadsheet accumulates data for a one-month period.

The first spreadsheet shell requires the students' names to be entered.

Each day the attendance times that were calculated, using the BASIC program, are entered into the spreadsheet. Each weekly and monthly totals are automatically totaled.

The second, third, fourth, and sometimes fifth week requires new names to be inserted alphabetically.

The names from the previous month are copied into the new shell for the next month.

The spreadsheet totals are printed weekly and monthly then placed into a binder. The totals are entered into the database each month.

BUILDING THE DATABASE

The database is an information gathering and retrieving system that enables the adult education department to maintain accurate record keeping on its students. It benefits both the student and the department. The students benefit by being able to obtain their test scores that reflect their level of achievement. The department has an effective method of determining when a student is due for a retest as well as having an up-to-date record of the student's progress. The student's attendance is recorded and made available for periodic audits.

Beginning on the next page, each field of the database is explained in detail. Examples are given, when needed, for each entry into the database. Many codes are listed below the field's description, others are listed separately and placed at the end of the field descriptions.

Read through each field for a thorough understanding of the database, then use it as a reference on an as needed basis.

Use upper and lower case letters in the name and the address portion of the database. Avoid abbreviations, if possible.

If information is missing and can not be obtained place a single X in that field. Date fields will not accept an X. See the Senior Learning Manager to obtain missing information.

If a student in unable to be tested, place the starting grade level of 0.1 or .1 in Test1 position.

DATABASE STRUCTURE

1. DATE - Enter the date located in the upper right hand corner of the registration sheet. Field type = date(8).

   EXAMPLE: 07/25/91

2. SITE - Enter the site number where the classes are being held. Field type = numeric(2).

   See site code sheet #2 for the site location.

   EXAMPLE: 1

3. OPERATOR - Enter the name of the person entering data into the database. Field type = character(13)

   EXAMPLE: Mary Smith

4. SS_NUMBER - Enter the social security number located on the registration sheet. Field type = character(11).

   EXAMPLE: 123-45-6789

5. L_NAME - Enter the last name of the student. The last name is located on the registration sheet. Field type = character(17).

   EXAMPLE: Jones

6. F_M-NAME - The first and middle or maiden name located on the registration sheet. Field type = character(17).

   EXAMPLE: Amy
   EXAMPLE: Amy J.
   EXAMPLE: Amy Jacqueline

7. STREET - Enter the street number and street name including apartment number located on the registration sheet. Field type = character(25).

   EXAMPLE: 123 Main Street
   EXAMPLE: 435 Avenue K, Apt. 2

8. CITY - Enter the name of the city located on the registration sheet. Field type = character(15).

   EXAMPLE: City Name

9. STATE - Enter the United States Postal Service approved abbreviation located on the registration sheet. Use capital letters. All the students live in the state of Xyyyyyy. Field type = character(2).

   EXAMPLE: XY

10. ZIP - Enter the five digit zip code located on the registration sheet. See a counselor if no zip code is given. Field type = numeric(5).

    EXAMPLE: 12345

11. PHONE - Enter the telephone number located on the registration sheet. No area code is required. Type NONE if there is a line drawn through the telephone number area. Field type = character(8).

    EXAMPLE: 123-4567
    EXAMPLE: NONE

12. SEX - Enter the student's sex code that is listed on the registration sheet. See code list below. Field type = numeric(1).

    1 = Male
    2 = Female

    EXAMPLE: 1

13. BIRTHDATE - Enter the student's date of birth that is located on the registration sheet. Field type = date(8).

    EXAMPLE: 07/05/64

14. BIRTHPLACE - Enter the place of birth that is located on the registration sheet. Use the codes listed on the Birthplace code sheet # 14A for students born in the U.S.A..

    Birthplace code sheet # 14B for students born outside the U.S.A. Field type = character(5)

    EXAMPLE: US/FL (This indicates the country is the United States and the state is Xyyyyyy.)

    EXAMPLE: 20 (This indicates the country is Mexico.)

15. ADMIT_DTE1 - To be used for the month of May only. Enter the date, from the registration sheet, the student was admitted to the program. Use the month code listed below.
Field type = character(4).

EXAMPLE: 06/91 (June 1991)

16. COURSE1_1 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

EXAMPLE: ABE N090 B1 A
EXAMPLE: ABE N091 B1 A
EXAMPLE: GED N055 B1S1 B

17. COURSE1_2 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

18. COURSE1_3 - Enter the title of course, the number, the section, and the goal code as the section, and the goal code as listed on the registration sheet.
Field type = character(15).

19. COURSE1_4 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

20. COURSE1_5 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

21. ADMIT_DTE2 - To be used for the month of May only. Enter the date, from the registration sheet, the student was admitted to the program. Use the month code listed below.
Field type = character(5).

EXAMPLE: 8/91 (August 1991)

22. COURSE2_1 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

EXAMPLE: ABE N090 B1 A
EXAMPLE: ABE N091 B1 A
EXAMPLE: GED N055 B1S1 B

23. COURSE2_2 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

24. COURSE2_3 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

25. COURSE2_4 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

26. COURSE2_5 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet.
Field type = character(15).

27. ADMIT_DTE3 - To be used for the month of May only. Enter the date, from the registration sheet, the student was admitted to the program. Use the month code listed below.
Field type = character(5).

EXAMPLE: 1/92 (January 1992)

28. COURSE3_1 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

    EXAMPLE: ABE N090 B1 A
    EXAMPLE: ABE N091 B1 A
    EXAMPLE: GED N055 B1S1 B

29. COURSE3_2 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

30. COURSE3_3 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

31. COURSE3_4 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

32. COURSE3_5 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

33. ADMIT_DTE4 - To be used for the month of May only. Enter the date, from the registration sheet, the student was admitted to the program. Use the month code listed below. Field type = character(5).

    EXAMPLE: 5/92 (May 1992)

34. COURSE4_1 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

    EXAMPLE: ABE N090 B1 A
    EXAMPLE: ABE N091 B1 A
    EXAMPLE: GED N055 B1S1 B

35. COURSE4_2 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

36. COURSE4_3 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

37. COURSE4_4 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

38. COURSE4_5 - Enter the title of course, the number, the section, and the goal code as listed on the registration sheet. Field type = character(15).

39. ENT_STATUS - Enter the entrance status code from the registration sheet. See the code list below. Field type = character(1).

    1. High School Graduate
    2. College Transfer
    3. GED
    4. Other

    EXAMPLE: 4

40. LEAVE_DATE - Enter the date the student left the program. Field type = date(8).

    EXAMPLE: 10/18/90

41. REASON_CDE - Enter the reason the student left the program. Field type = numeric(2).

    Use the REASON CODE SHEET # 42.

    EXAMPLE: 3

42. ETHNIC_ORG - Enter the ethnic origin of the student. From the registration sheet. Codes are listed below. Field type = character(1).

1. White
2. Asian or Pacific Islander
3. American Indian or Alaskan Native
4. Code not use.
5. Black, non-Hispanic
6. Hispanic

EXAMPLE: 5

43. CITIZENSHP - Enter the citizenship code from the registration sheet. The codes are listed below. Field type = character(1).

1. U.S. Citizen
2. Resident Alien
7. Other Foreign

EXAMPLE: 1

44. GOAL_CODE - Enter the goal code circled on the registration sheet. Field type = character(1).

EXAMPLE: A (Achieve basic literacy)
EXAMPLE: B (Earn high school diploma - GED)

45. HOW_LEARN - Enter the letter that is given on the registration sheet. See list below. Field type = character(1).

A. Via an advertisement
B. From friends/relatives
C. From an employer
D. Other

EXAMPLE: A

46. EMPLOYED - Enter the code given on the registration sheet. Y = yes, N = no. Field type = character(1).

    EXAMPLE: Y

47. WHY_HERE - Enter the reason given on the data sheet. Look at the reason and convert it into a code from the list below. Field type = character(1).

    1. GED prep
    2. GED registered
    3. Academic self improvement
    4. Other

    EXAMPLE: 1

48. FORMER_AEC - Enter Y = yes or N = no to reflect the answer to the question on the data sheet. Field type = character(1).

    EXAMPLE: Y

49. FORMER_DAT - Enter the month and the year, if yes was answered to the previous question about being a FORMER_AEC student. Field type = character(5).

    EXAMPLE: 04/89

50. HANDICAPS - Enter Y = yes or N = no as answered on the data sheet. Field type = character(1).

    EXAMPLE: N

51. RES_ALIEN - Enter the student's Resident Alien number as written on the data sheet. Field type = character(12).

    EXAMPLE: A12345678901

52. MARITAL_ST - Enter the code for the answer circled on the data sheet as listed below.
Field type = character(1).
1. Single
2. Married
3. Separated
4. Divorced
5. Widowed

EXAMPLE: 2

53. PROGRAM1 - Enter the program code from the Program Code sheet # 53.
Field type = numeric(2).

EXAMPLE: 1

54. PROGRAM2 - Enter the program code from the Program Code sheet # 53.
Field type = numeric(2).

EXAMPLE: 2

55. JUNE_S291 - Enter the attendance for June, Summer II, from the attendance spreadsheet. The hours are to be rounded to the nearest whole hour.
Field type = numeric(3).

EXAMPLE: 44 (44 hours and 29 minutes round to 44 hours.)
EXAMPLE: 45 (45 hours and 30 minutes round to 45 hours.)

56. JULY_S2 - Enter the attendance for July, Summer II, from the attendance spreadsheet.
Field type = numeric(3).

57. AUG_S2 - Enter the attendance for August, Summer II, from the attendance spreadsheet.
Field type = numeric(3).

58. AUG - Enter the attendance for August, Fall semester, from the attendance spreadsheet.
Field type = numeric(3).

59. SEPT - Enter the attendance for September from the attendance spreadsheet.
Field type = numeric(3).

60. OCT - Enter the attendance for October from the attendance spreadsheet.
Field type = numeric(3).

61. NOV - Enter the attendance for November from the attendance spreadsheet.
Field type = numeric(3).

62. DEC - Enter the attendance for December from the attendance spreadsheet.
Field type = numeric(3).

63. JAN - Enter the attendance for January from the attendance spreadsheet.
Field type = numeric(3).

64. FEB - Enter the attendance for February from the attendance spreadsheet.
Field type = numeric(3).

65. MAR - Enter the attendance for March from the attendance spreadsheet.
Field type = numeric(3).

66. APR - Enter the attendance for April from the attendance spreadsheet.
Field type = numeric(3).

67. MAY_S1 - Enter the attendance for May, Summer I, from the attendance spreadsheet.
Field type = numeric(3).

68. JUNE_S192 - Enter the attendance for June, Summer I, from the attendance spreadsheet.
Field type = numeric(3).

69. LOC_READ - Enter one letter. Use either E, M, D, or A, as printed on the Locator test.
Field type = character(1).

EXAMPLE: E

70. LOC_MATH - Enter one letter. Use either E, M, D, or A, as printed on the Locator test.
Field type = character(1).

EXAMPLE: M

71. TEST1_DATE - Enter the date of the first test.
Field type = date(8).

EXAMPLE: 11/14/90

72. T1_FORM - Enter the test forms, by entering the reading level and the math level from the first test.
Field type = character(3).

EXAMPLE: MA
EXAMPLE: EE
EXAMPLE: 5MD

73. T1_T_READ - Enter grade level of the reading total from the first test.
Field type = numeric(4)

EXAMPLE: 7.2
EXAMPLE: 12.9

74. T1_T_MATH - Enter grade level of the math total from the first test.
Field type = numeric(4).

75. T1_T_LANG - Enter grade level of the language total from the first test.
Field type = numeric(4).

76. T1_TOT_BAT - Enter grade level of the total battery from the first test.
Field type = numeric(4).

77. TEST2_DATE - Enter the date on the second test.

78. T2_FORM - Enter the number of the test form, then enter the reading level and the math level from the second test.
Field type = numeric(4).

EXAMPLE: 5MA
EXAMPLE: 6EE

79. T2_T_READ - Enter the grade level for the total reading from the second test.
Field type = numeric(4).

80. T2_T_MATH - Enter the grade level for the total math from the second test.
Field type = numeric(4).

81. T2_T_LANG - Enter the grade level for the total language from the second test.
Field type = numeric(4).

82. T2_TOT_BAT - Enter the grade level for the total battery from the second test.
Field type = numeric(4).

83. TEST3_DATE - Enter the date on the third test.
Field type = date(8).

84. T3_FORM - Enter the number of the test form, then enter the reading level and the math level from the third test.
Field type = character(3).

85. T3_T_READ - Enter the grade level for the total reading from the third test.
Field type = numeric(4).

86. T3_T_MATH - Enter the grade level for the total math from the third test.
Field type = numeric(4).

87. T3_T_LANG - Enter the grade level for the total language from the third test.
Field type = numeric(4).

88. T3_TOT_BAT - Enter the grade level for the total battery from the third test.
Field type = numeric(4).

89. TEST4_DATE - Enter the date of the third test.
Field type = date(8).

90. T4_FORM - Enter the number of the test form, then enter the reading level and the math level from the fourth test.
Field type = character(3).

91. T4_T_READ - Enter the grade level for the total reading from the fourth test.
Field type = numeric(4).

92. T4_T_MATH - Enter the grade level for the total math from the fourth test.
Field type = numeric(4).

93. T4_T_LANG - Enter the grade level for the total language from the fourth test.
Field type = numeric(4).

94. T4_TOT_BAT - Enter the grade level for the total battery from the fourth test.
Field type = numeric(4).

95. TEST5_DATE - Enter the date of the fifth test.
Field type = date(8).

96. T5_FORM - Enter the number of the test form, then enter the reading level and the math level from the fifth test.
Field type = character(3).

97. T5_T_READ - Enter the grade level for the total reading from the fifth test.
Field type = numeric(4).

98. T4_T_MATH - Enter the grade level for the total math from the test results.
Field type = numeric(4).

99. T5_T_LANG - Enter the grade level for the total language from the fifth test. Field type = numeric(4).

100. T4_TOT_BAT - Enter the grade level for the total battery from the test results. Field type = numeric(4).

SITE CODE SHEET #2

1. Main Campus / New H. program
2. I.R.C.I. site
3. L. P. A. site
4. M. C. I. site
5. N.A. site
6. O. campus
7. P. S. L. H. S. site
8. S. L. C. C. I. site
9. W. P. site
10. O. C. J. site
11. P. V. campus
12. G. T. site
13. S. A. site
14. F. P. U. A. site

BIRTHPLACE CODE SHEET #14A

UNITED STATES, POSSESSION AND TERRITORIES

STATE	ABBREVIATION
ALABAMA	AL
ALASKA	AK
ARIZONA	AZ
ARKANSAS	AR
CALIFORNIA	CA
COLORADO	CO
CONNECTICUT	CT
DELAWARE	DE
D C	DC
FLORIDA	FL
GEORGIA	GA
HAWAII	HI
IDAHO	ID
ILLINOIS	IL
INDIANA	IN
IOWA	IA
KANSAS	KS
KENTUCKY	KY
LOUISIANA	LA
MAINE	ME
MARYLAND	MD
MASSACHUSETTS	MA
MICHIGAN	MI
MINNESOTA	MN
MISSISSIPPI	MS
MISSOURI	MO
MONTANA	MT
NEBRASKA	NE
NEVADA	NV
NEW HAMPSHIRE	NH
NEW JERSEY	NJ
NEW MEXICO	NM
NEW YORK	NY
NORTH CAROLINA	NC
NORTH DAKOTA	ND
OHIO	OH
OKLAHOMA	OK
OREGON	OR
PENNSYLVANIA	PA
RHODE ISLAND	RI
SOUTH CAROLINA	SC
SOUTH DAKOTA	SD
TENNESSEE	TN
TEXAS	TX
UTAH	UT
VERMONT	VT
VIRGINIA	VA
WASHINGTON	WA
WEST VIRGINIA	WV
WISCONSIN	WI
WYOMING	WY

POSSESSIONS AND TERRITORIES

CANAL ZONE	CZ
GUAM	GU
PUERTO RICO	PR
VIRGIN ISLANDS	VI

BIRTHPLACE CODE SHEET #14B

FOREIGN COUNTRIES

1. Argentina
2. Brazil
3. Canada
4. Chili
5. China
6. Columbia
7. Costa Rica
8. Dominican Republic
9. East Germany
10. England
11. France
12. Germany
13. Guatemala
14. Haiti
15. Holland
16. India
17. Italy
18. Jamaica
19. Japan
20. Mexico
21. Nicaragua
22. Norway
23. Pakistan
24. Panama
25. Peru
26. Poland
27. Puerto Rico
28. Rumania
29. Spain
30. Sweden
31. Thailand
32. Venezuela
33. West Germany
34. West Indies
35. Bahamas
36. Philippines
37. El Salvador
38. Czechoslovakia
39. Australia
40. Cuba

BIRTHPLACE CODE SHEET #14 B continued

FOREIGN COUNTRIES

41.	Qro	61.	Vietnam
42.	Trinidad	62.	Egypt
43.	Taiwan	63.	
44.	Netherlands	64.	
45.	Guyana	65.	
46.	Honduras	66.	
47.	Algeria	67.	
48.	Virgin Islands	68.	
49.	Barbados	69.	
50.	Great Britain	70.	
51.	Yugoslavia	71.	
52.	Jordan	72.	
53.	Ecuador	73.	
54.	Greece	74.	
55.	Bahamas	75.	
56.	Russia	76.	
57.	Portugal	77.	
58.	Korea	78.	
59.	Palestine	79.	
60.	Switzerland	80.	

REASON CODE SHEET #41

REASONS FOR LEAVING THE PROGRAM

1. Earned a GED (General Education Development diploma)
2. Changed address or left area
3. Child care problems
4. Completed own objectives
5. Family problems
6. Health problems
7. Lack of interest; instruction not helpful to participant
8. Location of class
9. Obtained a job
10. Time class/program was scheduled (schedule conflict)
11. Transportation problems
12. Other known reasons
13. Unknown reasons
14. Completed Commercial Drivers License (CDL) program

CODE SHEET #53

PROGRAM CODES

1. Driver's license
2. New Horizons
3. HRS
4. Commercial Driver's License
5. Project Independence
6. Vocational Rehabilitation
7. Migrant
8. JTPA
9. DATA
10. DOC
11. PRENATAL
12. ALPHA
13. Multi resources
14. Displaced homemakers program

Appendix H

Questionnaire with Summary Report

STUDENT INFORMATION SYSTEM QUESTIONNAIRE

PLEASE TAKE A FEW MINUTES TO EVALUATE OUR STUDENT INFORMATION SYSTEM. YOUR INPUT IS GREATLY APPRECIATED.

MRS. G. GROSS

IDENTITY YOURSELF BY MARKING THE STATEMENTS AND QUESTIONS THAT APPLY TO YOU.

I AM: _____ AN ADMINISTRATOR

_____ A TEACHER

_____ AN AIDE

_____ OTHER

IF YOU ARE AN ADMINISTRATOR, PLEASE ANSWER QUESTIONS 1 - 4.

IF YOU ARE A TEACHER, PLEASE ANSWER QUESTIONS 5 - 7.

IF YOU ARE AN AIDE, PLEASE ANSWER QUESTIONS 8 - 12.

1. DID THIS COMPUTERIZED STUDENT INFORMATION SYSTEM ASSIST YOU IN OBTAINING STUDENT INFORMATION IN GREATER DETAIL?

   YES _____ NO _____

2. DID THIS INFORMATION ASSIST YOU IN MORE INFORMED DECISION-MAKING?

   YES _____ NO _____

3. HAVE REPORTS REQUIRED LESS TIME TO BE CREATED?

   YES _____ NO _____

4. WHAT PERCENT OF TIME HAS BEEN SAVED?

   80% ____ 60% ____ 40% ____ OTHER _____

STUDENT INFORMATION SYSTEM QUESTIONNAIRE
PAGE 2

5. DID YOU REQUEST ANY STUDENT INFORMATION FROM A SUPERVISOR THIS SEMESTER?

   YES _____ NO _____

6. WAS THIS INFORMATION MADE AVAILABLE TO YOU FROM THE COMPUTERIZED STUDENT INFORMATION SYSTEM?

   YES _____ NO _____ DON'T KNOW _____

7. DID THIS INFORMATION AID YOU IN APPROPRIATE STUDENT INTERACTION?

   YES _____ NO _____

8. HAS THE COMPUTERIZED STUDENT INFORMATION SYSTEM REDUCED OR ELIMINATED THE AMOUNT OF PAPERWORK YOU DO TO RECORD STUDENT INFORMATION?

   YES _____ NO _____ AFFECT UNKNOWN _____

9. HAVE YOU BEEN TRAINED IN THE USE OF THE COMPUTER?

   YES _____ NO _____

10. HAVE YOU LEARNED A NEW SKILL WHILE WORK WITH THE COMPUTERIZED STUDENT INFORMATION SYSTEM?

    YES _____ NO _____

11. HAVE YOU EVER CALCULATED TIME CARDS USING HAND CALCULATIONS?

    YES _____ NO _____

12. HOW MANY HOURS PER WEEK?

    1-5 ___ 6-10 ___ 11-15 ___ 16-20 ___

THANK YOU FOR YOUR RESPONSES

QUESTPRA

1=YES 2=NO

29 RESPONSES

PRACTICUM QUESTIONNAIRE

QUESTION NUMBER	1	2	3	4	5	6	7	8	9	10	11	12
ADMINISTRATOR	1	1	1	30								
ADMINISTRATOR	1	1	1	80								
TEACHER					2	2	2					
TEACHER					2							
TEACHER					2							
TEACHER					2							
TEACHER					2							
TEACHER					1	1	1					
TEACHER					1	1	1					
TEACHER					2							
TEACHER					1	2	1					
TEACHER					1							
TEACHER					2							
TEACHER					1							
TEACHER					2		2					
TEACHER					1	1	1					
TEACHER					1	2	1					
AIDE					1	2	1	2	2	2	1	3
AIDE								1	1	1	1	13
AIDE								1	1	1	1	8
AIDE									2	2	1	3
AIDE								1	2	2	1	3
AIDE								1	2	2	1	13
AIDE								1	1	2	2	0
AIDE									2	2	1	18
AIDE									2	2	2	0
AIDE								2	1	2	1	3
OTHER (AIDE/TESTER)								1	1	1	1	20
OTHER (HEAD TEACHER)					1	1	1	1	1		1	10
TOTALS	2	2	2	110	25	12	11	11	18	19	14	94
RESPONSES	2	2	2	4	17	8	9	9	12	11	12	10
ADM. AVG. PERCENT				55								
YES	2	2	2		9	4	7	8	6	3	10	
NO	0	0	0		8	4	2	2	6	8	2	
PERCENT OF "YES"	100	100	100	55	53	50	78	89	50	27	83	
% OF 38 TEACHERS					24	11	18					

AVERAGE HOURS USED
1 THROUGH 5 = 3
6 THROUGH 5 = 8
11 THROUGH 15 = 13
16 THROUGH 20 = 18

RESPONSES

ALL ADMINISTRATORS
ALL AIDES
11 OF THE 38 TEACHERS